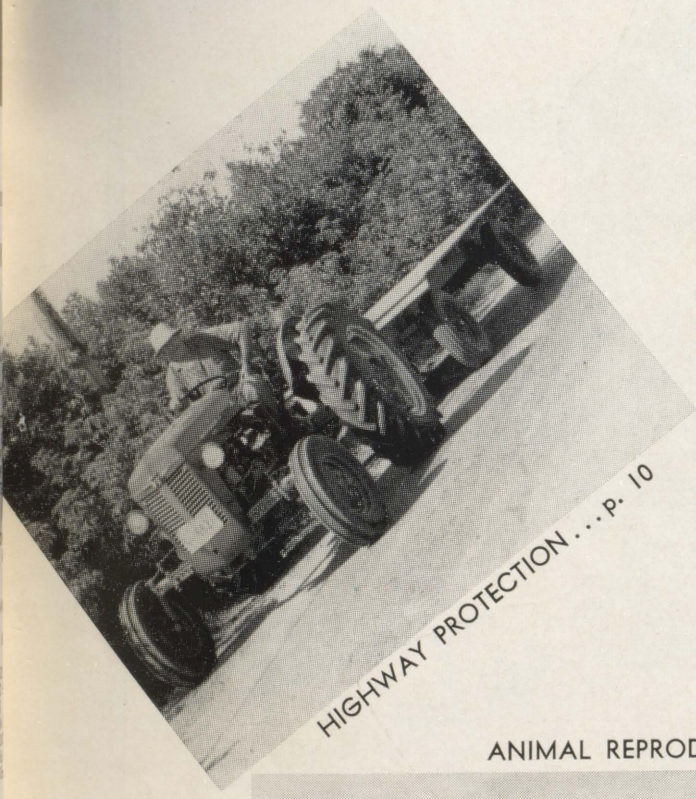
The Macdonald FARM Journal

AUGUST 1963



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THE MACDONALD LASSIE

AN EXPERIENCE IN CULTURAL EXCHANGE

SOME 8,000 foreign students, many from Asia, Africa and the West Indies, are attending Canadian universities. In 1955 there were 4,300 and it is estimated that by 1965 the number will increase to 11,000.

This is most certainly a large academic contingent but that is not our main concern here. We, as Canadian hosts, are presented with a golden opportunity for give-and-take to our mutual advantage. You may call it international goodwill, cultural exchange or, more simply, human understanding. Those of us who, in our own communities, act as representatives of our country with the visiting students, have discovered that we are enriched and stimulated by the encounter. Perhaps, to our surprise, we find that the exchange, far from being one-sided, has many aspects.

A large proportion of the students come from Commonwealth countries and, of these, the most numerous are English-speaking West Indians (1,200 in 1961-62). It is therefore fitting that we give some thought to the significance of these visitors in our midst — in our cities and on our university campuses from Halifax to Vancouver.

The Students and Their Problems

An amazing desire for education at any price has marked the awakening West Indies since the war. Consequently young West Indian students have come to our country from a variety of origins ranging from the most humble to the most prosperous. This new factor is of major importance since formerly only scholarship students or sons of wealthy families received university education.

By way of illustration, let us look at a few facts. These university students are engaged in over fifty branches of learning among which are: architecture, agriculture, dentistry, medicine, political economy, and, more exceptional, biochemistry, geology, and music. Such a wide range leaves no room for doubt regarding the complex and important role that this generation of West Indian students is called upon to play. Nor can we doubt the significance for the future, of their personal experience among us today. This seems even more obvious when we realize what a high proportion of the advanced students are working towards a master's or doctor's degree (there were 48 last year).

Participation in Canadian Life

It is very significant that there are countless examples of everyday co-operation where there is not the slightest thought or suggestion of discrimination. These are relationships that are direct and personal, in which a task or common interest is shared, and which naturally determine the behaviour. In the first place, such situations engender respect, goodwill, and mutual esteem.

In citing examples, we have a wealth of riches from which to choose, from one end of Canada to the other. There is the participation, now traditional, of many West Indians in campus or church choirs in the community. There is the close association on student publications or local newspapers. A recent editor-in-chief of the *McGill Daily* was a West Indian. One year there were five West Indian editors of university papers on different campuses. Last year, at Loyola College, the most responsible position in campus life, that of president of the Student's Administrative Council, was held by a West Indian. Some executive posts and presidencies in every kind of campus activity are filled by West Indians every year — perhaps the students' architectural association, an archaeological society, an outdoors club or an amateur dramatic group.

Everywhere young Canadians and West Indians get to know each other and have a good time together. The participation may develop through a voluntary organization. Recently in Vancouver, a student group of West Indian musicians and dancers entertained large audiences of patients in several hospitals. On other occasions, they lend their talents to folk festivals in the community. On the campus, if popularity contests are any indication of acceptance, we can point to West Indian queens at McGill, the University of Manitoba, and the Ryerson Institute of Technology, among others.

The West Indian students combine to bring us, through personal contact, a new perspective to our ways of thinking. They present us with new horizons, at first hand, whether it be on the campus, in discussion groups or in the homes where we entertain them.

Since it is a question of breaking down barriers through respect and friendship, no better way could be found than the university laboratory where demonstrators and assistants, side by side, whether Canadian or West Indian, guide their inexperienced comrades in experimentation and research. What they learn of human relations in such co-operation, West Indians and Canadians alike will carry over into their daily lives.

After University

A number of West Indian university professors have been educated in Canada. A Doctor of Geography, trained at McGill University, is today director of his department at the University of Ghana; his brother is Attorney-General in Cameroun. The head of the Department of Pharmacology, in the Faculty of Medicine at McGill is a West Indian; and another one has been on the McGill Biochemistry staff for several years. Still another very accomplished West Indian is head of the Tropical Medicine Department at Montreal's Royal Victoria Hospital, and moreover, he was a member of the Canadian team at the Olympic Games several years ago.

This splendid list is far from being exhaustive, but it is well to realize in conclusion, that many of those who have attended Canadian universities now hold key posts in their West Indian countries of origin, or in Africa where they have positions that entitle them to participe in making decisions of great importance. The head of the Department of Education and Culture in one African country, for instance, is a graduate of Mount Allison University. Another, formerly of Macdonald College, McGill, is head of the Trinidad Department of Agriculture.

Teachers and professors are probably the most numerous among the graduates and not the least important. An increasing number of West Indians teach our children in Canadian schools. Some of our young Canadian professors, on the other hand, go to the West Indies to share their learning and to enrich thereby their own personal experience.

Reciprocity is the word that summarizes and distinguishes the relations between our country and the new nations of the world. As we have seen, reciprocity is general in the relations that unite Canadians, old and new, with the numerous West Indians who live in our cities during the long winter season and summer months.

This enriching bond makes itself felt from day to day, well beyond the university walls. The initiative and imagination of many private groups have contributed largely to his experience. Group receptions and small international functions, have overcome the first isolation of the visitors — often followed by conferences and seminars perhaps by personal or group visits invitations to sites of picturesque, historic or industrial interest. The result is a gain that can only be measured in the personal experience of each one.

INSIDE . . .

Animal Reproduction

"Research workers will be working on methods for shortening the gestation period and developing mechanical incubators for the development of farm animals from conception to full foetal development." This is the closing statement of Professor Macdonald's article in this Journal on "Trends Towards Future Methods of Animal Reproduction". We think this article gives most of us something which is very interesting and somewhat revolutionary. There seems to be no end to the things which can be discovered and controlled once the correct method is found. Things which were only dreamed of a few years ago are now a reality. Not long ago, we learned how to use artificial insemination successfully. Now we realize the possibilities and the unlimited potentials of animal reproduction as stated in this article.

★ ★ ★

A New Variety — So What ?

When a new crop variety is recommended by the Quebec Seed Board, do farmers realize what this means. For one thing it means a better crop can be expected if you are fortunate enough to be farming in an area where this ne wvariety thrives .This new variety may be disease resistant, insect resistant, earlier maturing, drought resistant, higher yielding or may posses other desirable characteristics which were not present in other varieties.

This new variety must be good if it isn't it could not find its way onto the recommended list. Farmers should try this new variety for themselves if it is recommended for their area. The real value of this variety will only be known after you have made a fair comparison between your present variety and the new one.

It is by comparison that a farmer may learn about and use an improved variety for his own benefit. This new variety may yield better on your particular farm than it has in any previous test; it may yield better for you than it does for your neighbour.

This new variety did not just happen. Professor J. S. Bubar's article in this Journal points out some of the "trials and tribulations" that the palnt breeder encounters daily. Once the plans are made to work and to try to establish a better variety, there are numerous approaches. Noone has the final answer — mass selection may require handling and examining thousands of plants to find desirable characteristics. The I.B.M. machinery may be used to help in this selection. Many plants are such that new methods must be used, entirely different from past procedures. Often years of work are found to be of little value and the project is virtually started again from scartch, using a new approach.

The problems are many and the reward is "success" both for the plant breeder and the farmer.

★ ★ ★

Insurance . . .

We always talk about insurance, and wonder if we have enough, or the correct type.

On page 10 of this issue Henri Gonthier of Public & Industrial Relations Ltd. is concerned with highway insurance, and with educating the public of their responsibilities when driving motor vehicles on the public highway. Mr. Gonthier will visit and talk to any group of persons interested in insurance — he does not sell it, but his job is to inform the public of the legislation which is in effect in this province. He may be reached at his office at 1800 Sherbrooke Street W., Montreal 25.

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DEPARTMENTS

THE ART AND SCIENCE BEHIND A NEW CROP VARIETY

by Professor J. S. Bubar

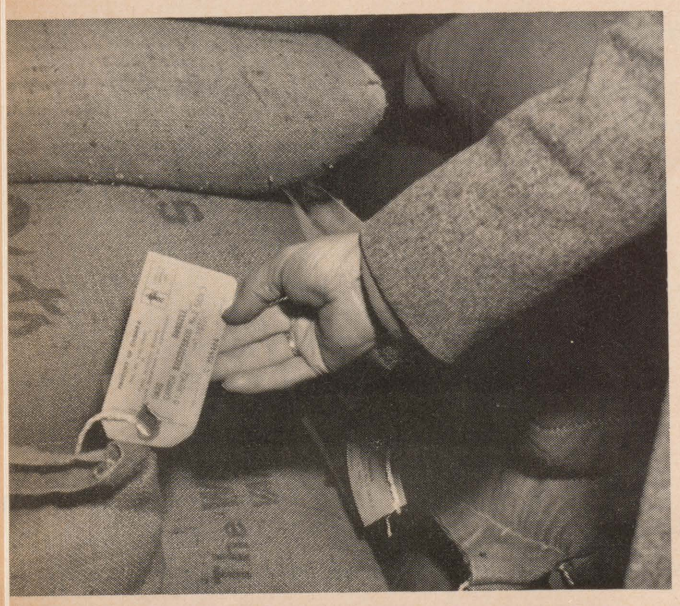
Each seed variety, like each purebred animal, has a known pedigree and individual history. That pedigree and history indicate what performance and results can be expected from varying conditions.

WHENEVER A FARMER seeds a crop, we strongly recommend that he seed a variety, or series of varieties, suited to his particular soil and climatic conditions and his planned uses. There are now so many good varieties of our common crops that you may not appreciate the tremendous effort that is involved in producing each of them. Each variety has its own special features which permits it to perform in a known and predictable manner where common seed of the same crop is unpredictable and may prove unsatisfactory. Each variety, like each purebred animal, has a known pedigree and it is true with plants, as with animals, that breed indicates what performance we can expect.

Each variety has its own individual history. Each represents a triumph by a plant breeder who has combined the ancient art of plant selection and modern biological science to produce a variety suited to modern farm needs out of the basic crop complex available to him. When a breeder sees *his* variety grown and appreciated by farmers and he knows he has conquered a problem, his reward is the same feeling of elevation known to the victorious athlete, the successful artist or the farmer who has just won a world championship. In this world of electronic brains, plant breeding provides man with an opportunity to use the most advanced scienfific tools and at the same time to demonstrate his personal artistic abilities.

When a breeder starts to create a new variety, he has first to consider very carefully what characteristics will be required by farmers when his variety is finally in production, if he is successful. This means the breeder must accurately predict requirements ten, twenty or even thirty years in the future — a near impossibility in this age of agricultural revolution. Many technical successes in plant breeding have failed to catch on with farmers because the varietal characteristics are no longer required when the variety finally becomes available or because the characteristics which overcome the problems, which formed the basis for the original objectives, lead to other unforeseen problems. Thus, the first task which faces the breeder is to define the objectives which he will attempt to fulfil. These must be real objectives in terms of farmer needs at the time when the variety is finally on the market.

His next step is to find the best possible sources of the characteristics that he requires to meet his objectives. This involves looking at all of the different plant types within the crop and evaluating the whole range of characteristics within each plant type. If he examines all available materials and still does not find plants with characteristics that meet his objectives, he may turn to other related plant species and attempt to make crosses between the crop and these other species. He will thus create new and radically different combinations that have never existed before in nature. He may, in time, be able to introduce characteristics that will meet his objectives after a long, involved selection program in which he selects against the many undesirable combinations that generally follow from these wide crosses. Or he may turn to atomic radiation and attempt to change the hereditary material through gene mutation to produce plants with the characteristics he needs, again going through thousands of plants to find the ones that meet his needs. He may have to spend years just finding the materials he needs to start putting his variety together. On the other hand he



The seed sealed in this bag has a known pedigree that can be traced through every stage of seed multiplication all the way to the original plants selected by the plant breeder. You can be sure that the crop from this seed will exhibit the special features the breeder put into the variety names on the tag.

may be lucky and find hitherto unknown source materials that meet most of his objectives so that he may be able to produce a good variety without much further effort. The skill which the breeder exhibits in finding the best source materials is a critical factor determining the further success of his program. Those who have not given adequate attention to this phase of the work, and who have rushed on to more scientifically interesting later stages have sometimes found that an overlooked source collection is agronomically better than the final product of a long and costly program.

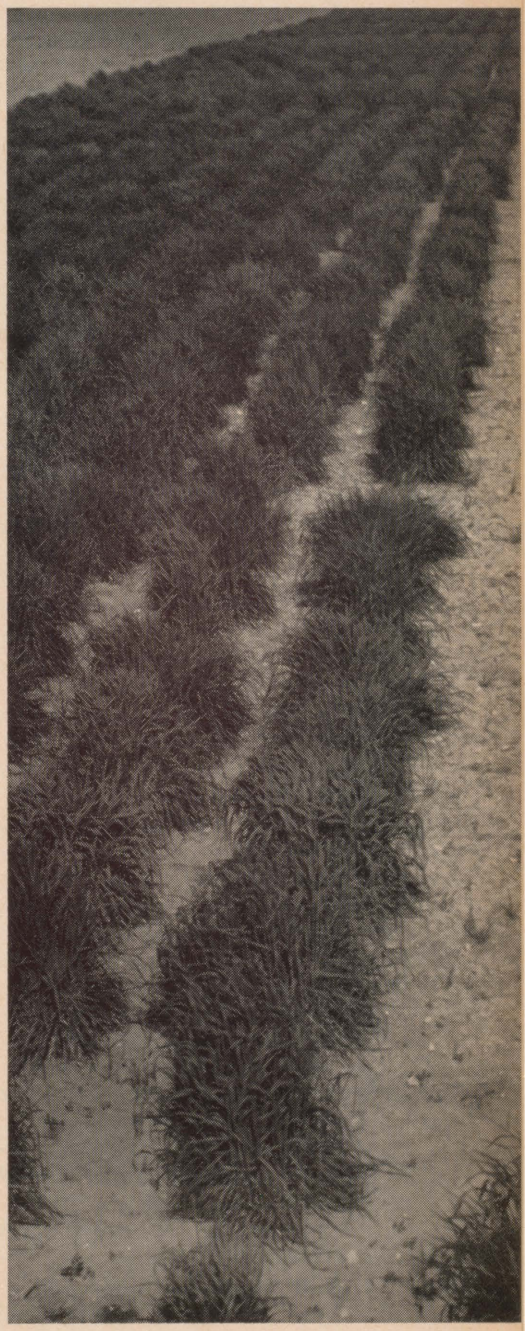
Once the general sources are located, the breeder has to find the individual plants that will best suit his needs. He may cross plants and select from the progency of his crosses to get the plants with the combination of characteristics he is looking for. He has to reproduce his material and evaluate it under conditions which will tell him if his stock will meet his objectives. This move may take several years and involve hundreds of plants. His procedures will now be tailored to the crop he is working with. It is different for corn, for apples or oats, but is determined to a large extend by the general mode of reproduction of the crop being worked on. There are similarities in breeding of all crops reproduced by cuttings (apples, potatoes or roses) and within the self-pollinated crops (oats, wheat or peas) and again within the cross-pollinated crops (corn, timothy or clover). The breeder will follow an appropriate program to combine the plants which produce the best progenies into varieties that will best fit the needs that form the basis for the objectives of his program. When he feels he has something worthwhile, he will arrange to have this entered in trials conducted by other research workers throughout the area where he feels his variety stands a chance of being used.

After several years of testing, during which time the large proportion of the potential varieties are dropped because they do not show enough improvement over existing varieties, the plant breeder may have grounds for releasing his variety for multiplication so that it will become available to farmers. The next step followed in Canada is to apply for a licence for his variety from the Plant Products Division of the Canada Department of Agriculture. All varieties of field crops sold in Canada by variety name must be licenced before they can be sold. Granting of such a licence means that the variety possesses some special merits in at least some parts of the country. The granting of a licence really marks the birth of the variety.

Once the variety is licenced, it has to be multiplied so that sufficient seed will become available to meet the farmers' needs. Much effort has been made in Canada and the United States in recent years to develop schemes that will insure that the seed of good varieties will be available to farmers. In the past many good varieties, particularly of forages, have not reached the farmers because of failure to get the seed multiplied. Part of the problem lies with the seed consuming farmer who has not demanded and been willing to pay premiums for the seed of improved varieties. You can be assured that a variety that has been developed and licenced does have valuable features and, if its features are the ones required on your farm, it will pay you to pay a ten or fifteen per cent premium for the named variety rather than common seed of the same crop.

Next time you look at the blue tag of a bag of Certified seed, I hope you will remember that this is the result of years of effort from the conception of the variety in the mind of the breeder, its birth where it gets its name, and that it has now grown up so that it is ready to go to work for you. The blue tag assures you that this seed has a known pedigree to the known characteristics of this variety. Now it is up to you to use the variety with the characteristics that will serve you best for it is only through use of improved varieties that plant breeding is able to make a real contribution to agriculture. It is the use that is made of the improvements which makes plant breeding economically sound, in addition to its being an interesting academic exercise in applied science.

Each individual plant is studied and individual characteristics are recorded. Each plant here traces to a single seed which was started in a tiny flowerpot in the green house.



A spaced plant survey of timothy at Macdonald College. The problem is to find the best 4 or 5 plants out of thousands.

CHEMICAL CONTROL OF PESTS NOT ALL BAD

by Frank O. Morrison
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I am seriously concerned about the blanket or even tacit approval being given by so many biologists to the thesis propounded by Miss Carson in her book, "Silent Spring". Miss Carson's presentation is dramatic, her list of references designed to be impressive (source titles are repeated and repeated), but her understanding often confused and fuzzy. She confuses the dangers or occupational hazards which face pesticide manufacturers and applicators with the danger to the public from residues and contamination; she confuses the balance of nature (a doubtful concept at best), with population regulation in the best interests of man and shows an extremely fuzzy understanding of biological control and of the objectives of scientists, be they biologists or chemists. She appears to me to have as her objective discrediting many eminent scientists and would have done well to have considered the warning of Dr. James R. Killian, Jr.; "If American Science is to continue to attract its proper complement of creative and gifted minds, scientists must combat the notions that science and engineering are incompatible with the disciplines of the great humanities, that they are narrowly materialistic and destructive of human values." 1

To set the record straight in the matter of pesticides:

1. There is no question but that chemicals have on occasion been thrown around with abandon. Probably more than one half of the chemicals applied in Quebec orchards over the past ten years have been totally unnecessary. This is waste and inefficiency but direct injury to man or nature other than on a very local and transitory scale has not been established.

2. Chemicals have in some instances, when used for one pest killed off the natural enemies of another species and precipitated an attack by a previously unimportant pest. Such instances, however, are not necessarily indications of a general principle. Each case must be documented and studied individually.

3. Proved instances of human death or injury from the consumption of pesticide contaminated products are practically non-existent.

4. Biological control by the use of parasites and predators has been limited to a few introduced pest species. Bacterial sprays show promise but are subject to the same limitations as chemical treatments in that they must be frequently repeated and that we know little of their sublethal effects (or for that matter possible lethal effects), on other organisms.

5. Biological and related non-chemical controls are at the moment totally inadequate to provide the protection needed to maintain the present quality and quantity of agricultural production.

6. No bird, animal, plant or other species has been rendered extinct by pesticide treatment directed against other forms and the number of successful eradications where this has been the aim can be counted on the fingers of one had. Some of man's other activities have led to species extinction as have changes in "natural" interrelations between species over long periods of time.

7. The adaptability of organisms: i.e. their capacity to develop in such a way as to live on in changed surroundings is a universal phenomenon. As long as treatments chemical, physical or biological do not eliminate all individuals of a population but allow certain "tougher" individuals to persist we can expect an increase in the proportion of such tough individuals as the generations go by and hence the development of resistant strains. There is nothing sinister about chemical control as opposed to say mechanical or biological control which contributes to the development of escape mechanisms in insect populations and hence requires that the chemical be changed to again be effective. Experimental work at Macdonald College indicates that mice can develop resistance to DDT and that such resistant or tolerant populations show no deterioration of their other functions or abilities. This type of adaptability is general in living organisms.

8. Very seldom has the effect of a pesticide on wildlife been actually measured. Dead birds picked up on lawns and shown to have died of chemical poisoning are no proof that the bird population is being reduced, any more than the presence of dead skunks and raccoons on our highways can be held to establish that they are in danger of being eliminated. Bird watchers counts, themselves relatively inaccurate, but the best quantitative evidence we have, do not bear out claims that robins, for example, are being threatened as a species. Laboratory tests on toxicity of chemicals to wild birds are most unsatisfactory because of the unmeasurable restraint factor. Moreover we do not know what bird populations are agriculturally desirable. In this matter we badly need quantitative research, not mere opinions.

9. The notion fostered by a number of people that materials of biotic origin are "natural" and hence "safe" or non-hazardous, is patently false. The most potent toxins known to man are of plant origin. Strychine, nicotine, and some of the toxins produced by fungi and bacteria are well know examples. Naturally occurring carcinnogens are common. Moreover a "natural diet" is not necessarily the best. Pastures and hays deficient in trace metals fail to support healthy livestock and necessitate mineral supplements. Inadequate iodine is the cause of goitre; inadequate fluorine encourages tooth decay.

10. The record of performance of chemical controls is impressive. There are those who can remember fighting their way through a haze of flies to milk the cows. The average farm home in the 1920's harboured more house flies than most barns today. Bedbugs were thirty years ago common inhabitants of many human habitations. Fungal disease in 1845 caused a failure of the Irish potato crop and resulted in a population reduction from which that country has never recovered. Today chemical controls largely prevent such a disaster. Between 1935 and 1945 malaria struck from 50 to 150 thousand people a year in the United States. In 1950 just over 2000 cases occurred; in 1961, 85 cases recorded, only four of which

(continued on page 22)

FUTURE METHODS OF ANIMAL REPRODUCTION

by Malcolm A. MacDonald

Skeptics scoffed at artificial insemination. We now approach the time when the A. I. Technician will guarantee twin female offspring from every cow.

CHANGES IN METHODS of farm animal reproduction are being made that it is almost impossible to integrate the complexity of scientific, economic, and aesthetic principles involved.

Animal breeding involves the application of the classical sciences, Anatomy and Physiology coupled with the more modern science, Genetics with intuition, artistry or luck.

Most improvements in commercial farm animal breeding now result from the application of new techniques, many statistical, that are used in population genetics. Swine, beef cattle and poultry rate and efficiency of gain; egg numbers and hatchability in poultry, etc., are examples of improvement accomplished through various agencies by using mass selection techniques. These techniques are not limited to selections within a breed but are used also to establish new breeds such as the Lacombe, Santa Gertrudis, and Jamaica Hope in North America. The use of breed and in some cases, sub-species or species crosses to obtain benefits of hybrid vigour are now so commonplace that further mention need not be made.

Interesting though the aforementioned examples of progress may be, the most dramatic and sensational developments are those found in physiological aspects of animal breeding. Improved knowledge of spermatoza function has lead to more and more vials of semen from outstanding sires which may be more readily stored for longer periods before use. Deep frozen semen is commonplace, calves are being born now from sires that have been dead for over a generation and freeze-drying technique improvements indicate even greater control of sperms in the future.

Progress toward sex ratio control is rapid and may soon be a practical realization. It has been known that factors such as parity influences sex ratios; but nothing may be done about the sequence of pregnancies. It is also known that certain sires produce more offspring of one sex than another; elevation affects sex ratio. Changes in diet and frequency of ejaculation have also influenced sex ratios. More recently, techniques employing centrifugation and electrophoresis have been used to separate semen samples into sex dominant aliquots. Much remains to be done in perfecting techniques but in the future, the inseminator who incidentally will carry also sheep, swine and beef semen as well as that of dairy cattle, will ask: "Do you wish male or female offspring of one sex than another; elevationaffects sex ratio. Changes in diet ducer will be able to obtain a high proportion of females, the beef feeder will want and obtain a high proportion of males from his breeding animals!

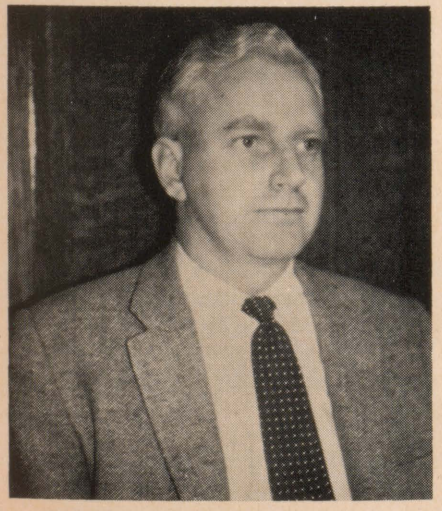
Increased female productivity is being attempted through the controlled induction of multiple ovulations in outstanding animals and the employment of incubator animals to nurture the superior genotypes during the embryonic and foetal stages of development. It is possible now to have animals come in heat on or very close to a preselected date and to produce more than one ovum (egg) capable of fertilization. The purpose is to have ewes and cows produce a high proportion of twins. Newer knowledge of endocrinology has permitted such advances. Further work is in progress to prevent the early embryonic or pre-embryonic degeneration of some fertilized eggs thus, increasing the numbers carried to full foetal development and successful birth.

Teams of research workers are studying techniques for causing outstanding females to produce large numbers of eggs during a heat period, methods of collecting these eggs, successfully fertilizing them in test tubes with semen and implanting them in "incubator" or receiver females. Thus, the outstanding female of the future like the sire of today, will have many offsprings per year rather than few, one or less than one.

Skeptics scoffed at artificial insemination as a practical livestock practice. We now approach the day when the successor to the A. I. Unit technician will answer the telephone and take an order such as this from a dairy farmer:

> "Yes, sir. You wish twenty-four ova to be collected from your outstanding cow, so and so, on such and such a date, to be test tube bred to such and such an outstanding bull; all offspring are to be daughters; The fertilized eggs are to be implanted in the following twelve cows so that each will produce twin heifers. Arrangements will be made immediately."

When that telephone call is routine, research workers will be working on methods for shortening the gestation period and developing mechanical incubators for the development of farm animals from conception to full foetal development.



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HIGHWAY PROTECTION FOR THE FARMER

by Henri Gonthier

The responsibility of the farmer and his dependents of age to drive a motor vehicle is exactly the same as that of any other person. Here is an outline of highcay legislation as it concerns the farmer.

HOW MUCH IS YOUR FAMILY WORTH?

The Province of Quebec new highway legislation sets it at $35,000 — minimum. The Courts set it at anywhere from $8,000 to four or five times that.

If these authorities value of the human life in dollars and cents is at this level, what, to you, is its value.

Out of 30,107 accidents recorded in the first quarter of this year, 9,793 were in rural areas, 20% of the drivers involved were in the age group 16 to 25 and 51% in the age group 25 to 44. Although the number of women drivers involved was only half of one per cent, the percentage for each age group was about the same.

This is rather a gruesome picture when the Quebec Provincial Highway Legislation sanctioned in May, 1961 is admittedly the most thorough and complete in the country — and that private organizations, the safety league, the all-Canada Insurance Federation have spent hundreds of thousands of dollars to teach and train drivers and users of our provincial roads.

At Sir George Williams University, training courses for teachers in high school driver education are held each summer; courses in all aspects of driving — technical, legal, financial — are given in some communities and high schools to grade ten and eleven, student speakers have appeared on radio, television and before home and school and parent — teacher associations in urban communities, BUT HAVE NEVER BEEN INVITED TO ADDRESS FARMERS OR FARMERS WIVES ASSOCIATIONS.

The need in this sector of our population is probably as great as in any other. The farmer is an individualist. The fact that he is the master of his property makes it difficult for him, under certain circumstances, to understand that he assumes some legal and moral obligation when he or his dependents use property which is the public domain. Highways and roads are built and maintained with public money and are the property of the community. As such their uses are regulated by special legislation — in which duties, responsibilities, sanctions and penalties are stipulated. The right to drive, cycle, or use them in any way, is a privilege.

It has become a tradition that legal enforcement agencies have always been more or less tolerant toward the farmer's interpretation of the letter of the law and of their responsibilities to the community, but this attitude is murder on the highways.

It is probably in the light of this tradition that two recent events appear to have been mis-interpreted by the farming community of Quebec. One of these events was an order in Council dated March 30th, 1962, ammending the registration costs of farm vehicles and exempting from registration those vehicles not commonly used on the highway. This Order in Council amended in the farmers' favour revision to Article 4 of the Highway Code, dealing with basis and tarif of fees. But it did not in any way alter any of the provisions of either the Highway Code or the Highway Victims Indemnity Act in respect to the responsibilities of the owner of a motor vehicle.

The other item referred to a communication issued by All-Canada Insurance Federation: Farmers have traditionally paid less for their insurance since most farmers use their car sparingly and on light traffic roads. Insurance companies have given farmers a discount for the prevailing rural insurance rates. This year, for the first time, separate statistics have been compiled for farmers and most farmers will benefit from the change.

This communication may have been interpretated as an indication that farmers may, at a future date, enjoy special privileges or treatment. But any interpretation of either of these items which tend to make the farmer think that he is a special person under the Provincial Highway Code or Act is definitely wrong.

The responsibility of the farmer and his dependents of age to drive to a motor vehicle is exactly the same as those of any other person. Moreover the farmer, being the owner of private car and farm trucks, tractors, etc., is at the same time an individual and a head of a commercial concern. As such he assumes, under the Highway Legislation the duties and responsibilities stipulated in its provision, under both headings: individual, businessman.

It is not generally known that, "The owner of an automobile or a motor vehicle is responsible for all damages caused by such automobile or motor vehicle, unless he proves otherwise." That responsibility is for every motor vehicle that has been registered in his name. If one such vehicle registered in his name is involved in an accident, even though it may have been driven at the time by a person other than himself, and even though he may not have been in the vehicle, if he or the driver can not produce, upon request from the legal representative, a certificate or financial responsibility in the minimum amount of $35,000 for that specific motor vehicle, the director of the Motor Vehicle Bureau is authorized to suspend the owner's driver's licence and the registration of all his other motor vehicles and withdraw his markers until such time as he can provide proof of financial responsibility, security that he will satisfy any condemnation resulting from the accident of proof that he has been held not responsible for the accident or has satisfied any claims thereof.

However, all is not a series of obligations and negative dictums. There is positive benefit to be derived under the

Highway Victim Indemnity Act. For the first time in our history, the value of the human unit, as a member of the community, both an economic, consuming and producing unit and as a society entity is recognized by law and represented by monetary value.

The Highway Victim Indemnity Act stipulates that every victim of a highway accident has to be compensated either or personal injury or damage to property. A fund called the Highway Victim Indemnity Fund Corporation has been instituted and is financed at the pro-rata of business done in the Province by insurance companies trading in the personal liability field. Compensation is paid by the fund — when justified requests are submitted by victim or victims — even in cases of hit-and-run accidents or accidents caused by insolvent drivers or the drivers of insolvent business concerns. Furthermore, for those responsible for accidents and who wish to appeal the decision of the Minister of Transport and Communications or his director, the Act has set up the Highway Security Board.

This is a brief outline of a legislation as it concerns the farmer which has been drafted after a decade of study and surveys. It does solve most of the legal aspects of our highway problems but it does not solve that of human behavior when in control of our powerful, modern motor vehicles.

Our drivers, with few exceptions, just happen to have learned the technique of handling these machines through a sort of trial-and-error method. The present generation of farmers sons and daughters are now driving on the public thoroughfares, to be amused, to be entertained, to escape from parental discipline, much too often with the half-hearted consent of the parents. The results are found in the news columns of our rural and urban dailies. Last year 200,000 cars were involved in 107,000 accidents and 1,121 were killed in Quebec alone — one third of which were members of our farming communities.

What can be done, other than to simply obey the law?

A number of things: first we can teach and train our young people to act safely at all times; then we can bring pressure on municipal authorities to institute schools for young drivers; then we can bring pressure on the community to take positive measures to moderate the toll exacted by traffic accidents in the hands of irresponsible people; and lastly we can all set the example by complying with Provincial, Municipal and local rules and regulations — by assuming the conduct of citizens fully aware of the dictum of the golden rule toward other citizens.

HOW TO PICK AND PITCH A TENT

This unusual tent — made of canvas called airplane cloth — is designed specifically for cold weather use. The tunnel door can be completely sealed to protect occupants from chilly weather.

New — and popular — are tents suspended from exterior metal framework that can be erected in minutes.

At a fraction of the cost of resort dwelling, an entire family can live confortably in tents while touring the country

Economy is one of the big reasons for the rising popularity of family camping. Plenty of comfortable, accessible campsites is another.

At a fraction of the cost of resort dwelling, an entire family can live comfortably while touring the country. They can find campgrounds deep in the woods or within sight of a major city. Many sites are equipped with tables, fireplaces, running water, and sanitary facilities.

But the deciding factor in creating camping converts among family vacationers is the remarkable improvement in equipment that adds comfort, convenience, and ease to outdoor living.

The stiff, hard-to-manage tents that once were associated with camping have been replaced with lightweight cotton shelters that can be pitched in minutes. For the fashion-minded, they come in vivid or pastel colors — glacier blue, bright orange, yellow, grey, and green. Snug sleeping equipment, portable stoves and iceboxes, and many other items provide homelike comforts in the heart of the out-of-doors.

Since the tent you camp in — your home away from home — may determine whether your trip is an enjoyable one to be followed by many others, you should follow some pointers in selecting your tent. Here are some tips gathered by the National Cotton Council from tent makers and veteran campers throughout the country.

First, consider the size of your party and the amount of room you'll need for sleeping, storing gear, and for family gatherings. Decide whether you're going to camp long in one spot, or change campsites frequently. If the latter, look for a relatively lightweight tent that is easy to pitch and take down.

Construction features to look for in a tent are: double-stitched, lapfelled seams; reinforced grommets and points of strain; full storm flaps on windows, accessible from the inside; sewn-in floors, and zippered or snapped door sills.

In buying you'll have a choice of tenting fabrics. About nine out of every 10 tents sold are made from a group of cotton fabrics generally referred to as "canvas." They include duck, drill, twill, and poplin.

Here are thumbnail definitions to help you recognize each of them:

Duck — A heavy, flat-woven fabric of exceptional strength and durability, weighing eight to 15 ounces per square yard.

Drill and twill — Strong fabrics distinguished by diagonal or slanting lines in the weave. They are quite similar in appearance, but drill is generally a bit lighter, weighing about seven ounces per square yard.

Poplin — A tightly woven fabric characterized by its light weight, smooth texture, and flexibility. It is long wearing and is used in high-quality tents.

Cotton is favored for tents because the fabrics "breathes," permitting air to circulate freely throughout. Other fabrics seal out the outside air and have a tendency to sweat from accumulated moisture.

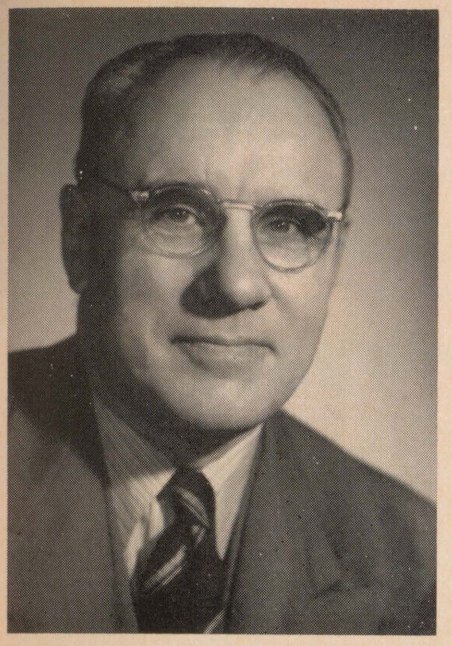
There's variety in styles, just as in fabrics. Attracting considerable attention this season is a collection of unusual ropeless, poleless, and stakeless tents that are suspended from an exterior metal framework. They can be erected in a matter of minutes, being hung onto the frame with elastic cords that adjust automatically to change due to aging, shrinking, and winds. They end forever the necessity of climbing inside the tent to erect it.

The umbrella tent, recognized by its small roof and high sloping sides, is probably the most popular family style. It is easy to pitch, requires comparatively small area of ground room, and is ideal for touring vacations. An old standby is the wall tent, good for long vacations in one spot. It has a long sloping roof and low walls, atlhough some variations, called bungalow or cottage tents, have high walls that provide more headroom.

The tent trailers, comparative newcomers to the scene, can go any place you can take your car. At the campground the versatile little trailers fold out into "king size" tents, some on the ground, some completely off the ground. Trailer tenting probably will reach an all time high in popularity this season and scores of different makes and models are on the market.

A good tent, given proper treatment and attention, can last for 20 years. Never store your tent when it's wet, check it after every trip for rents and tears, and make certain it's clean before it is put away.

If you take good care of your tent, it'll take good care of you. Then all you'll have to do is relax, have fun, and savor the beauties that only nature can provide.



D. C. Munroe, Director
Institute Of Education
Macdonald College

THE ROYAL COMMISSION OF INQUIRY ON EDUCATION

Future plans for education in Quebec must depend on goodwill between all concerned if we are to succeed was the statement made recently by Professor D. C. Munroe of Macdonald College when speaking to representatives of organizations which had presented briefs to the Royal Commission on Education.

Professor Munroe reviewed some of the revolutions which have been in progress in the field of education since World War II. The number of one-room schools has reduced substantally for both Protestants and Catholics. The cost of transportation for pupils has greatly increased. The number of pupils has doubled since World War II, and is still increasing. Technical schools are developing very rapidly and more are on the planning boards. More colleges with expanded facilities have been constructed and charters have been granted. One-quarter to one-third of the provincial budget is now alloted for educational purposes. During the last ten years the cost of education has increased and also the debts have increased substantially. The finances for education are at times in a serious situation.

Professor Munroe said that education cannot be regarded as a local problem; it must have an overall administration. This is why the administration aspect was first studied by the Commission. There must be an organization formed so that future recommendations can be carried out in an organized manner.

Education is essentially an investment and pays dividends over the years. It is the basis for social and economic growth within the country.

The selection of personnel and their training is of major importance. We need interested competent teachers on the staff of these schools so that pupils will have the best possible guidance.

We are learning quickly how to plan for our future needs. Only recently have we learned how to plan ahead so that adequate staff and facilities will be available for the students in the Elementary School, High School and University. The next problem is to obtain these facilities. It is one thing to predict our needs but quite another problem to make these predictions realities.

Professor Munroe explained that the Commission sought "a unified approach within the contest of representation for all in the Province and the basic assumption that every child is entitled to education — including the exceptional child as well as the mentally retarded."

During the question period. it was evident that many people were concerned about Protestants losing their autonomy under the new administrative organization. Professor Munroe said, "the progress of Protestant education rests more on basic goodwill than on any attempt to maintain autonomy. We have lived too long in separate worlds. Enrichment will come to both sides from better co-operation all the way from the universities right down the line."

Professor Munroe said he had three points to make about the autonomy question in relation to the Commission's plan for a single ministry of education with two deputy ministers, one of them a Protestant:

1. Protestant autonomy was less than it was a few years ago because control of financing had been taken from education authorities — the sums involved were too large.

2. Quebec society has now become pluralist rather than merely Roman Catholic and Protestant. If Protestant autonomy was demanded, other groups would ask for independence, too, and "such fragmentation would be a backward step."

3. In the proposed structure, the Commission has maintained many elements of the old Protestant autonomous system. One deputy minister and a vice president of the General Council are to be Protestant and "it is clearly understood" that Protestant viewpoints are to be taken into account as well as those of other groups. On a number of points, Professor Munroe replied that they would be dealt with in subsequent installments of the Commission's report. The Commissioners were still meeting several days a week in the hope of finishing their work before the end of 1963.

THE FAMILY FARM

PUBLISHED IN THE INTERESTS OF THE FARMERS OF THE PROVINCE
BY THE
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Compiled by T. Pickup of the Information and Research Service, Quebec Department of Agriculture and Colonization.

This month in the FAMILY FARM *Section*

PHOTOGRAPHS BY OMER BEAUDOIN

HONEY 1962

A Quebec beekeeper calms his bees with smoke before inspecting a hive.

The Quebec Bureau of Statistics, Agriculture Section, issues a final estimate of the honey crop and its value in the Province of Quebec for 1962.

There were 1,993 bee-keepers in the Province of Quebec in 1962 as compared with 2,133 in 1961. Estimated at 48,300 for the year under review, this is the lowest number of hives for the entire 1940-62 period. The maximum was reached in 1945 with 95,470 hives.

The honey crop for 1962 is estimated at 3,140,000 pounds against 2,971,000 pounds in 1961. Average production per hive was 65 pounds as compared with 61 pounds the preceding year.

Total production for 1962 is divided as follows: white honey, 66 per cent; dark honey, 30 per cent; honey comb, 4 per cent.

The value of the 1962 honey crop is $722,000 while that of 1961 was $683,000. The average weighted price paid to producers per pound of honey (excluding containers) was 23 cents, which is the same amount as the previous year. The aggregate value of honey and beeswax, estimated at $740,000 in 1962, shows an increase of 5 per cent over 1961, when it totalled $702,000.

MILK CONSUMPTION

Canadians could easily dispose of the milk produced in Canada if they were to raise the level of their consumption of dairy produce a little, said the Prime Minister, Mr. Pearson, recently at the official launching of a publicity campaign to encourage the use of dairy products. Our problem, he said, is not so much over-production as under-consumption. For example, the number of dairy cows in Canada — about three million — has not increased since 1950, whereas our population has risen by four million in the interval.

Even though the average milk production of our cows has increased, it has not kept pace with the growth of the population.

Alice Riendeau with her brother Bernard among the apples at St. Remi, Napierville.

A SCAB-RESISTANT APPLE

Apple scab plays no favorites :
The most serious disease in the industry, it attacks all varieties

For generations, Canadian orchards have been the battleground in a costly war between apple scab and the fruit grower. But for some years the grower has had a powerful ally. Scientists have taken up the challenge and now, after years of stand-off fighting, victory is in sight. Through a programme of cross-breeding, researchers with the Canada Department of Agriculture have developed a scab-resistant apple. Much work remains to be done before scab-free varieties are available for commercial use, but scientists are confident that they are heading in the right direction.

Apple scab plays no favourites; the most serious disease in the apple industry, it attacks all commercial varieties. It can be controlled, but that is a costly business. Growers must buy or rent expensive equipment and spray their orchards as many as sixteen times during the infection period. In some cases, this means spraying virtually every week.

How expensive is it? L. P. S. Spangelo, a scientist in the Genetics and Plant Breeding Research Institute, estimates that successful development of resistant varieties would save Canadian apple growers $2,000,000 annually. Moreover, spraying is a gamble. A delay of eight to ten hours during a critical period could cost an orchardist his entire crop.

As a springboard to developing scab-resistant varieties, scientists took various species of small, almost marble-shaped apples that were not susceptible to scab and crossed them with non-resistant varieties: from this marriage came a variety of seedling trees. These were placed in a chamber with optimum conditions for the fungus growth. Disease organisms were sprayed on the seedlings. Those that did not become infected with scab were selected for further study. The others were rejected forthwith.

The tests started in the spring of 1949. Today Spangelo and his colleagues proudly point to a selection that they believe is equal to the renowned McIntosh in eating quality. Further tests will be made — on winter hardiness, fruiting qualities, and so forth. How long will the experiments take? Spangelo replies that it takes many years to get a new variety into production in a commercial way . . . and the programme was launched just over thirteen years ago!

There are many problems to overcome. For example, the fungus develops pathogenic races. One of these is common to apple areas all over the world; another is limited to South Dakota; a third has been found in only the Kentville, Nova Scotia, and Ottawa areas of Canada. But scientists must be on the look-out for further races.

Time poses another problem. Like the members of the animal kingdom, plants go through a juvenile stage. It takes fifteen years for certain seedling trees to bear fruit. Researchers are attempting to leap-frog this obstacle by using growth chambers. They hope to condense ten years' normal growth into two or three years under artificial conditions.

To obtain one useful variety, researchers find that they must grow thousands of seedlings. This means allocating many acres to the search for one useful seedling and is therefore another limiting factor.

Before a fruit breeding programme is started, parental varieties are carefully selected following progeny analy-

(continued on page 18)

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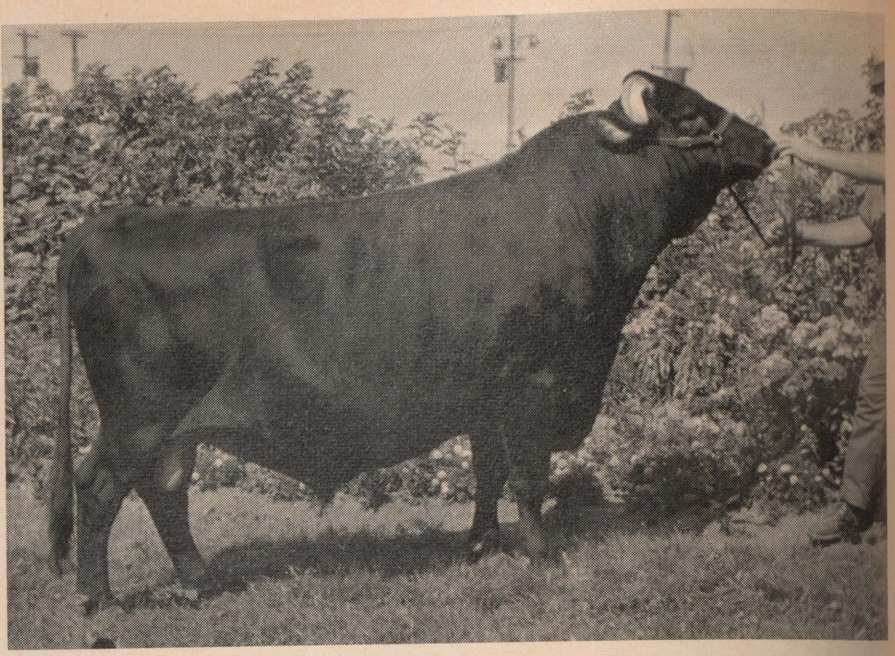
THE QUALITIES OF A GOOD SIRE



The French-Canadian bull "La Gorgendiere Fameux Railleur"

The choice of a sire should always be in the foreground of every breeding programme.

The careful choice of sires is of basic importance in every branch of livestock breeding: it is the key to success, because the value of the herd is so largely dependent upon the qualities of the male breeding animals. The more surely the hereditary qualities are fixed in the sire (often by many generations of breeding and selection) the more likely they are to be transmitted to his offspring.

In all kinds of livestock, the sire should be a purebred. In so far as quality, conformation, type and other visible characteristics are indications of merit, they are certainly very important; but the qualities of the parents (to the extent that they are heritable) are more important still. Before choosing a male, the wise breeder will study the production records of its sire and dam, grandsire, grand-dam and even more remote ancestors.

The surest way not to make a mistake would of course be to buy a sire whose breeding qualities were known from the performance of all his progeny. In fact, a good sire might be defined as one borne by a good female to a good male and able to beget offspring possessing the qualities desired by the breeder. In the case of beef cattle very good conformation is also sought after, and trueness to the type of the breed that one raises or wishes to raise (each breed having its special characteristics).

Once he has taken the first decisive step of choosing a sire of high quality, the owner will continue, year by year, to select severely within his herd, according to a well-defined breeding programme. By doing so he will succeed in building up an entire herd of high-quality animals. Sometimes a sequence of two or three good sires will be enough to produce a very valuable herd after several generations.

The choice of a sire should always be in the foreground of a breeding programme. Moreover since, on a mixed farm, the livestock are the main channel through which most of the crops are marketed, they should certainly be capable of transforming them into milk, meat, wool, etc., efficiently and economically. That is why it is a mistake to be penny-wise and pound foolish in buying a sire, even though a purchase often calls for great sacrifices.

PIGS: As the emphasis on pig-raising in Quebec is on the production of bacon-type hogs, the boar should be of this kind. He should be lengthy, with a deep flank: the legs should be sufficiently strong with adequate, clean bone; the back firm and slightly and evenly arched; the loin full and deep. He should be quiet though not sluggish, and descended from a strain of high quality: preferably his parents should have qualified on Advanced Registry, in which case a study of his ancestors and kindred indicate the qualities of his strain: its precocity, tendency to large litters, length, thickness of back fat, size of eye-muscle, quality of ham, efficiency of feed conversion, and age at marketable weight. As in the case of cattle, too many breeding swine are bought on the strength of their good looks instead of after a study of breeds and strains based on progeny tests.

SHEEP: There are a number of reasons for the decline in sheep-raising, but one of them deserves special mention — indifference with regard to the importance of choosing a good, purebred ram. Because the number of ewes in a flock has usually been small, farmers have hitherto been satisfied with a grade ram obtained from a neighbour, if they did not keep one of their own rearing. A ram has an enormous influence on the whole flock and on the quality of the lambs. There are now enough breeds of sheep in Quebec to permit a suitable and satisfactory ram to be chosen. He should be a well-developed and typical specimen of his breed, wide in the loins and chest, with good legs-of-mutton.

The market for lamb will remain profitable for those with a choice product to sell. This can be achieved if we have high-quality rams at the head of our flocks. Indeed, success with any kind of livestock depends to a great extent on the services of a good sire.

Marthe Dugas bringing in the eggs on her father's farm at St-Jean l'Evangeliste, Bonaventure.

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

STRONGER EGG SHELLS

Factors affecting the strength of egg shells require more attention in spring and summer

As the emphasis on quality grows, so the penalties of faulty management and nutrition increase. As the days lengthen in spring, the factors affecting the strength of egg shells require more attention, not only for the sake of avoiding cracked eggs but also "hair cracks" which are often unnoticed by busy farmers in the spring.

Shell Strength and Longer Days

Why the need for more care in spring? Firstly because longer days (more daylight and warmer weather) mean more active ovaries, more rapid production, more eggs laid, and more calcium needed. Secondly, the mineral metabolism of the hen is not quite as efficient in the hotter weather. Thirdly, as the year moves on, birds are getting older and are less efficient at putting shells on eggs.

Heredity apart (which is discussed later) whatever the season or the stage of lay, weak or cracked shells are due either to faulty nutrition or imperfect poultry husbandry. Even with skilful management and sound nutrition, however, cracket shells will amount to about two per cent, but they should never exceed five per cent of eggs produced.

Causes and Cures

Good eggshell husbandry demands:

1. egg collection three times a day, in small baskets, plastic-coated wire buckets, or directly into trays (broad end uppermost for rapid cooling) and storage always in a cool place;
2. nest boxes (with clean approaches) that are clean, well littered, and dark to avoid the creation of favoured spots where layers crowd and crack eggs. Single nest boxes are preferable to the communal type;
3. a recognition — when choosing collection times — that the hen is a morning worker and that comparatively few eggs are laid after midday;
4. a routine, systematic removal (or treatment) of broodies, which not only damage eggs but also impair keeping qualities;
5. minimum cleaning (with avoidance of washing) because all cleaning methods involve extra handling which tends to increase the incidence of cracks;
6. care in "doubling up" in battery cages, which can increase the number of cracks (though it is otherwise economically justified).

Good Eggshell Nutrition Demands:

1. an adequate supply and balance of the minerals calcium and phosphorus with manganese and vitamin D3;
2. the feeding of a balanced ration with the correct amino acid make-up in relation to the level of metabolisable energy (overfat birds tend to produce misshapen eggs with a high proportion of weak shells);
3. an understanding that whereas calcareous or soluble grits such as limestone, oystershell, etc., are essential to shell strength, insoluble or grinding grit such as flint, or granite (which have a grinding function when grain is being fed) contribute nothing to shell strength;
4. the avoidance of certain sulphonamides and some hormone additives that may have a harmful effect on shell quality.

Breeding for Shell Strength

Egg shell characteristics are also highly heritable, and laying stock should be purchased from breeders who pay careful attention to the shell quality of eggs for hatching, because this quality will tend to be transmitted to progeny.

Because modern intensive methods result in increased production, a greater strain is imposed on the birds' eggshelling mechanism and the genetic aspect now assumes even greater importance.

A strong, clean shell is nature's own perfect "prepack", a vital part of increasing egg profits, a product of good management, sound nutrition, and successful breeding, and an essential part of the campaign to promote the consumption of more eggs.

PRODUCTION OF DISEASE-FREE SEED POTATOES

A station for the production of Elite seed potatoes was established at Manicouagan by the Quebec Government in 1961. The station is situated on the north shore of the St. Lawrence some 12 miles east of Baie Comeau or, as the crow flies, about 250 miles from Fredericton, New Brunswick. Its chief features are as follows:

1. it is well isolated and protected by marshes, forests, and natural barriers;

2. it is situated on newly cleared land which has never borne a crop of potatoes within living memory;

3. plants such as apple trees, shrubs, and weeds that might harbour potato aphids are almost entirely absent;

4. only authorized persons are admitted;

5. visitors are not allowed to wander about the grounds or on the plots;

6. disinfection basins for vehicles are available at the entrance;

7. only seed potatoes already tested in a greenhouse and in a laboratory are introduced into the station;

8. seed potatoes, once they have left the station, may not be brought back;

9. varieties (about eight in number, each comprising a number of clones) are separated from one another by about 300 to 500 feet. Limited amounts of seed will be available in 1963;

10. the plantings are laid out and managed so as to reduce to a minimum the risk of disease being spread by implements. The plants are cultivated when they are young. Ample space is left between the different lines to allow implements to manoeuvre;

11. members of the staff must wash their hands with a good detergent and disinfect their clothing before handling seed. Those responsible for inspection and selection must wear rubber leggins and carry a metal box to hold the samples that they gather;

12. whole tubers are planted by means of a cup-type planter;

13. for indexing or other tests, only part of a tuber may leave the premises; the parent tuber remains in storage at the station;

14. there is a well-equipped laboratory for the carrying out of bacteriological, colorimetric, and other tests, including those to determine the reaction of alternative hosts to viruses. Greenhouses are available for the work of indexing, at the station and also at the Institute of Agricultural Technology at La Pocatière;

15. several thousand tubers (over 5000 from the 1962 crop) are inspected every year for signs of virus disease and bacterial ring rot: this figure is ex-

beetles, tarnished plant bugs, leaf hop-

16. Colorado potato beetles, flea beetles, tarnished plant bugs, leaf hoppers, etc., are unknown in the vicinity: aphids have never been caught in the insect traps, although late last August one or two aphids were found per 2000 leaves examined. (Time alone will tell how long these favourable conditions will continue);

17. tubers stored at the station are for future use there;

18. tubers which are to be sold are kept in a new modern storage five miles away, in order to reduce the amount of traffic entering the station;

19. Elite seed will be sold to Quebec growers through a provincial office.

There are few establishments for the production of seed potatoes in Canada which have so strict a programme or are so well isolated. Mr. Courcy, Minister of Agriculture and Colonization, is convinced that this undertaking of his Department will be of immense service to potato growers, who will soon be able to obtain for planting tubers entirely exempt from disease.

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

STERILE MALE TECHNIQUE TO AID ORCHARDISTS

A novel approach to pest control may spell the end of codling and Oriental fruit moths in areas where they are a problem.

The method, known as the "sterile male technique", was used successfully in Florida and Curacao to wipe out the screw-worm fly, a livestock pest.

Studies are currently under way at two Canada Department of Agriculture research stations on the use of this method to eradicate the codling moth, a pest of apples and pears, and the oriental fruit moth, a problem in peach growing areas.

Basically, the technique involves rearing and releasing a large number of sterile male moths in an area, following an estimate of the natural male population. It is essential that the number of sterile moths released be large enough to dominate the naturally occurring fertile male in order to perform most of the matings. Eggs laid from matings with sterile males do not hatch.

By releasing sufficient steriles males over the period of several generations, it is believed possible to eliminate the pests from specific areas.

Both species have the characteristics for this type of control. They exist in fairly small numbers, are found in well-defined geographical areas, and are easily raised in large numbers. Also there is detailed information on their behavior, including mating habits and range of flight.

At Vineland Station, Ontario, J. A. George is investigating the use of the technique on the Oriental fruit moth. This moth is found only in peach growing areas like the Niagara Peninsula where its numbers are kept low by spraying. Methods of rearing the species throughout the year have been devised at Vineland, and tests are under way to develop a method of sterilizing the males.

At Summerland, British Columbia, where Dr. M. D. Proverbs is carrying out tests with the codling moth, male pupae are sterilized by exposure to rays from radioactive covalt. This treatment does not affect mating behavior, nor does it make the moths radioactive, Dr. Proverbs reports.

The technique is now being tested in an isolated apple orchard near Summerland. If successful, it could lead to a simplification of spray programs. A reduction in the number of sprays lessen destruction of beneficial insects that prey on mites, aphids and other orchard pests.

From "Farm News", Ottawa, No. 1051.

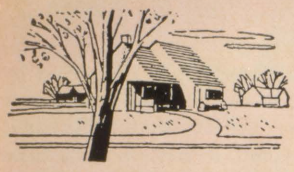
A SCAB-RESISTANT APPLE

(continued)

sis. Canadian researchers are working with the McIntosh variety (by far the most popular apple on the market) and the Melba, an early summer apple.

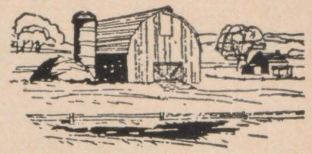
The world has lived with the problem of apple scab for many, many years: an apple in Caravaggio's painting "Christ at Emmaus" is shown to contain the bothersome fungus. While resistant varieties may not make their appearance for some time yet, most apple growers and consumers will be content to wait — encouraged by the knowledge that good progress is being made.

From "Farm News" No. 1051.



The Better Impulse

NEWS AND VIEWS OF THE WOMEN'S INSTITUTES OF QUEBEC



PRESIDENT'S ADDRESS

Quebec Women's Institutes Incorporated
Annual Convention
June 26th, 1963

It is my pleasure to extend greetings to all assembled here on the occasion of the Annual Convention of the Quebec Women's Institutes. To our honoured guests and to our many friends and associates of other organizations, and to the delegates and members from communities across this beautiful "La belle Province".

We have with us tonight a special guest, the President of the Associated Country Women of the World, Mrs. van Beekhoff. We are indeed honoured to have her with us. She comes from the land of the tulips. Living as I do in the Ottawa Valley, I can express to her the joy and pleasure we Canadians have at tulip time in our Capital City, when we enjoy the tulips that are sent each year by Queen Juliana of Holland ever since she lived in Ottawa during the past war and where one of her daughters was born. I do not think I exaggerate when I say that between the Dutch people and Canadians there seems to be a special affinity. Flowers know no barriers, so let us think it is the tulips that carry this message to us.

We have come back home to Macdonald College once again and how we enjoy the beautiful surroundings and the kindly hospitality. We are fortunate to have this privilege. We acknowledge with gratitude the generosity and many favours accorded to us during the past years by the Provincial Department of Agriculture, the encouragement and assistance contributed by Macdonald College staff and the co-operation and loyal support that we receive at this College is something the QWI values greatly, for without it the successful functioning of our organization would be almost impossible. We are deeply grateful for this.

The theme this year is "Unity and Understanding". I am sure all of us here realize that this theme has a special meaning to us, for if we wish to have unity we must have understanding. A former ACWW President, Mrs. R. Sayre, said in an address right here with us at this College, and I quote, "Love means understanding". So understand your neighbour, try to put yourself in his place, show respect and tolerance for his ideas. This is the kind of understanding that is needed so badly, particularly at the present time.

If we are good W.I. members, we can do a job here and practice what we preach. The task facing Canadians is to develop a set of values and a series of habits suited to seeing us through these rapidly moving times in which we live. We pride ourselves on being Canadians, but we must remember we are also citizens of the world. Citizenship is the art of living together. It also means sharing with those less fortunate than ourselves. W.I. members can do this by supporting ACWW, for without help that organization cannot function as it should.

The Lady Aberdeen Scholarship and "Pennies for Friendship" are two special projects for this coming year. It has been said recently that "Service is the rent we pay for the room we take up on this earth". The W.I. is a voluntary organization and it means service all long the way. A happy life (which I think we all aspire for) is not measured by the calendar, nor is it a negative or passive thing. It is the outcome of things you do, the product of positive and active living. The seeker of the "Happy Life" will never be satisfied with things as they are.

Many things need to be done, too many people are still ill-housed, ill-fed, and ill-clothed. The need for Social Services in our rural areas is urgent in many places in our Province. We in QWI have much to do in our next "Fifty Years"; let it never be said that we were apathetic and because we refused to accept responsibility that we just let things go.

His Excellency the Governor-General and Madame Vanier are sponsoring a Conference on "The Family and the Home", which is to be held in 1964.

The Women's Institutes' founder, Mrs. Adelaide Hoodless, showed how wise she was when she started the W.I. 66 years ago. She knew that the home was the centre of family life, but in a special way the farm and country home is the centre of everything. She, therefore, came to the conclusion that the educated wife and mother in that home was of prime importance to the family and to the nation. The home in our modern times seems to be threatened in many ways, so we in the Women's Institute have still a lot to do. "Let us never forget that the cultivation of the earth is the most important labour of man. When tillage begins other arts follow. The farmers, therefore, are the founders of human civilization" — Daniel Webster.

As our motto says, "For Home and Country". The way of country and farm living is second to none and where children are not cramped and stifled, it is where human dignity and regard for the wonders of nature are instilled in them. I close with this quotation by Canon Ferrer that is used so often but which seems so applicable to the Women's Institute: —

"I am only one, but I am one.
I cannot do everything but I
can do something. What I can do,
I ought to do. What I ought to do,
by the Grace of God I will do".

But let the world be prepared, for as Matthew Arnold said, "If ever the world sees a time when women work together for the benefit of mankind, it will be a power such as the world has never known".

(Mrs. H. M. Ellard)
President,
Quebec Women's Institutes.

THE 49th CONVENTION QUEBEC WOMEN'S INSTITUTES INC.

The Convention opened with the usual Executive and Board Meetings Monday and Tuesday. On Tuesday the ACWW President, Mrs. van Beekhoff, arrived from Ottawa after attending the FAO Congress in Washington. She was met at the Dorval Airport by the president, Mrs. H. Ellard and past president Mrs. G. Harvey and taken to lunch in Montreal, after which they attended a press conference where Mrs. van Beekhoff was interviewed. At 4:30 Mrs. van Beekhoff visited the City Hall to sign the Golden Book, and then was taken on a horse cab tour of the city and mountain.

Wednesday morning Mrs. van Beekhoff was taken on a tour of the College farm by Mr. G. Driver and in the afternoon she addressed the delegates, whose numbers were augmented by extra busloads of members. Mrs. van Beekhoff won all hearts with her warm and friendly personality. She told us of her own background, of her husband whom she had left at home on their farm and of her son in college. She then traced the growth of ACWW, from Stoney Creek, and Mrs. Watt taking the idea of the Institute to Britain, of Lady Aberdeen's interest in rural organizations and of the beginning of ACWW in 1929.

Mrs. van Beekhoff had attended several of the world conventions of ACWW and has travelled around the world visiting associated societies. It was evident she was most impressed by the influence the organization had had on the life of the family in the rural areas of the world, in particular in those of the underprivileged nations. She appealed for support of the Pennies for Friendship, which is the only income they have for the upkeep and extension of this work for Home and Country.

After the address we were treated to the QWI Fashion Show. Dress goods for 16 costumes were donated by the Canadian Celanese Ltd. and this was made up by 16 WI members and modeled by them. Mrs. Oliver of Canadian Celanese was commentator. We never dreamed we had so much glamour in the QWI and many a doubting seamstress went home determined to take up her scissors again.

A buffet supper was served by the dining room staff and Cavagnal WI loaned their beautiful embroidered Jubilee cloth for the occasion (we covered the top with plastic, not being able to face laundering all those maple leaves.)

At the Wednesday evening session the delegates were welcomed by Dr. H. G. Dion, iVce Principal of Macdonald College, who sketched the difference in rural living in the last generation, that community activities were so all-embracing as formerly due to the automobile and the ease of travelling greater distances for amusement and the pursuit of culture. He also stressed that women had come into a position of more importance in the community than ever before in history and that this prominent position was likely to continue for another generation.

Other greetings were brought by our affiliated societies, and Mr. Glen Brown came as a representative of the Minister of Agriculture. Mr. Brown made a plea for unity between the two races, stated that the QWI could be a bond between them, and advised us to make a study of the BNA Act.

After the evening session guests and members gathered in Laird Hall to meet Mrs. van Beekhoff and refreshments were served by Ste. Anne's WI.

Thursday was back to business — and a heat wave. Why does the weather man always wait with his heat until the QWI Conventions?

Several offices had become vacant and the following were elected for the new term: Recording Secretary, Mrs. Dewar Scott; Convenor of Home Economics, Mrs. Warren Ross; Convenor of Welfare & Health, Mrs. Claire Jacques; Convenor of Publicity, Mrs. H. E. Palmer.

Students at the Food and Nutrition Course.

INDIAN WOMEN ATTEND FOOD AND NUTRITION COURSE

During the week of June 10th a short course in Foods and Nutrition was given in the School of Household Science at Macdonald College to a group of eight Indian women from reserves throughout Quebec. The four reserves represented were Notre Dame du Nord, Oka, Caughnawaga and Odanak.

The week long course emphasized nutrition, food purchasing, meal planning, and budgeting. These were taught both in a series of classroom lectures and some practical work in the food laboratories.

During the week the students scored their own diets according to Canada's Food Guide and learned among other things, why they should drink milk instead of soft drinks and that cheaper cuts of meat are just as nutritious as some of the more expensive ones.

In the laboratory the students did some canning, made jam and marmalade and learned some new methods of preparing less tender cuts of meat.

Judging from the response and enthusiasm of the group we feel that the course was very successful. To quote Mrs. Mary Oke from Oka, she said "We have learned quite a lot about the value of different foods and how to economize on the right things if we know what they are."

THE MONTH WITH THE W.I.

ABITIBI: MALARTIC enjoyed the showing of a film taken at their hat-course. They are buying a heater for their hall. **BONAVENTURE:** BLACK CAPE had a display of hooked rugs, embroidery, and ceramics. This branch has a foster-child in the Phillipines, from whom a letter was read. GRAND CASCAPEDIA have collected clothing for the Verdun Hospital, and seeds have been ordered for school fair gardens. MARCIL report that their history is being compiled by Mrs. Oliver Watt. Excerpts were read at the meeting. MATAPEDIA held a social evening to raise funds. **BROME:** ABERCORN named a favourite dish using milk for roll call, and AUSTIN paid 1¢ per inch of their waist measurement. KNOWLTON'S LANDING enjoyed a "Touring Day" with lunch in Newport, Vermont. SOUTH BOLTON had an Old and New sale, and their roll call was "Sing, Say or a Dime you must pay".

CHATEAUGUAY - HUNTINGDON: AUBREY- RIVERFIELD have collected a large amount of clothing, jewellery, etc., for the Verdun Hospital. As this was Grandmother's meeting, an appropriate reading, "What's Wrong With Grandma?" was given by Janet Reddick, and a solo — "The Quilting Party" given by Berta Orr. DUNDEE collected cotton for cancer and FRANKLIN CENTRE catered for 150 guests at a Teachers' Association Banquet. **HEMMINGFORD:** had a talk by County President, Mrs. Middlemiss, on a trip she had taken to the Hoodless Homestead. Cards were sent to China. HOWICK's guest was Mrs. J. Manning, who gave an interesting talk on her trip around the world, illustrated with slides. ORMSTOWN entertained Dundee.

COMPTON: BURY gave donations to the school for public speaking and prizes. BROOKBURY did likewise and CANTERBURY entertained Miss L. Palmer, their County President. They held a paper drive, and formed a visiting sick-committee. EAST ANGUS gave a W.I. pin to a member leaving for England, and had a sale of plants and flowers. EAST CLIFTON had an apron parade and sale of the aprons.

GATINEAU: AYLMER EAST prepared articles for competition and display at the Convention. EARDLEY discussed the School Fair list, and two members, Mrs. Edward Kennedy and Mrs. Joseph Kennedy modelled dresses they made at the Sewing Course. LAKEVIEW had a demonstration on Needlework given by Mrs. Frances Wood. LOWER EARDLEY saw a film — "To Serve the Mind" and they brought in parcels to be sent to a Mental Hospital. Recipes are being collected with the idea of compiling a book. RUPERT held two card parties. An industrious member painted the Cemetery fence and the W. I. Hall veranda, and a new bench was purchased for the cemetery.

JACQUES CARTIER: ST. ANNE DE BELLEVUE raised a nice sum of money for their education fund by saving Salada symbols. Cotton was collected for cancer, and a social evening was held at the home of Mrs. C. Blake.

MEGANTIC: INVERNESS paid 1¢ for every year married. A card party was held, and tables are being made to be used for suppers, etc. KINNEARS MILLS named their favourite magazine and sent for a booklet on the history of the F.W.I.C.

MISSISQUOI: COWANSVILLE plan to sponsor a child through the Save the Children Fund. A donation was given to a Student Loan Fund. DUNHAM's roll call was "Hints on how to make a home happy". Their Home Economics convener spoke on how to make maple syrup. FORDYCE held a drawing on a bathing suit, and they have completed a quilt. STANBRIDGE EAST received pictures of the two boys in Athens, Greece, they are sponsoring. A contest on plants and flowers was arranged by Mrs. G. Tremblay, and shrubs are to be planted on their plot of land.

PONTIAC: BEECH GROVE distributed penny saving aprons to members. Articles made from a yard of cloth were auctioned. BRISTOL held a Dutch auction and CLARENDON had a sale of plants and shrubs. QUYON had a talk on the Care of the Woodlot given by James Horner and SHAWVILLE saw slides on gardening, accompanied by an interesting talk by Mr. Frank Dench, Ag. Rep. from Renfrew, Ont. Members canvassed for the Red Cross. STARKS CORNERS paid the insurance on their community hall. WYMAN gave prizes for the school fair and bought a government bond. Dr. Hudson spoke on "The Beauty of Pontiac" and "The Art of Music".

QUEBEC: VALCARTIER's meeting was in charge of their Agriculture convener, Mrs. W. McCune, who arranged the showing of two films — "The Peat Moss Industry in Quebec" and "The Wonders of Nature". Gifts are to be sent to patients in the Verdun Hospital.

RICHMOND: CLEVELAND had a social meeting, with each visitor receiving a corsage. A quilt has been completed. DENISON MILLS members were the recipients of corsages of spring flowers presented by their president. A drawing is to be held on a Butterfly quilt, just completed. The history of Denison Mills was read by the Education convener, Mrs. C. Carson. Prizes are to be given to 2 schools. GORE held a silent food sale and Mrs. S. Doyle won a contest making 60 words out of "Women's Institute". MELBOURNE RIDGE are concerned about the dumping of rubbish on the roadsides. They are catering for a 50th Anniversary. RICHMOND HILL had a contest on Canada's Health rules, with prizes won by Mrs. R. Sloane and Mrs. J. Mason. A Bingo was held to raise funds. SHIPTON had a contest for the best corsage made out of vegetables, with 1st prize going to Mrs. M. Baker and 2nd to Mrs. J. Olney. Articles were read from the C.A.C. Bulletin. SPOONER POND auctioned articles they had made from 1 yard of material. A paper on the earliest settlers in Spooner Pond was read. RICHMOND YOUNG WOMEN catered for the County meeting. They enjoyed a weiner roast at the close of their meeting.

ROUYN: FARMBOROUGH are planning a hat-making course.

SHERBROOKE: ASCOT are collecting Pennies for Friendship at each meeting. BELVIDERE presented their "Grandmothers" with a potted geranium in bloom. A paper drive was held and a donation made to the new C.A.C. Testing program. BROMPTON ROAD held an apron parade and an exchange of slips and bulbs. LENNOXVILLE made 335 cancer dressings. Their Past President was presented with gifts of appreciation. MILBY also collected Pennies for Friendship. Each member sent a card to a sick person, or a shut-in.

STANSTEAD: AYERS CLIFF held a paper drive and had a quiz making words from "Women's Institute" HATLEY CENTRE's contest was for homemade doughnuts, which were later sold. NORTH STANSTEAD had a display of antique dishes. A gift of two stuffed animals was received from Stanstead, England. Miss Claire Shipway, School Nurse, was guest speaker. A subscription to the National Geographic magazine was renewed for the school library. WAY MILLS held a dinner to raise funds.

Farm Forum News 'N' Views

MEETING IN SASKATOON SETS PLANS FOR 25th NATIONAL FARM RADIO FORUM

Rural development, the difficulties faced by rural youth in orientation and career selection, and the questions faced by the rural church, will highlight the Farm Forum season next winter.

Over seventy delegates, representing farm organizations of all types, parent teacher groups, educational organizations, churches, women's groups, and farm forums, met in Saskatoon from June 3 to 5 to lay plans for the 25th year of operation of National Farm Radio Forum. All provinces except British Columbia, Prince Edward Island and Newfoundland were represented.

Key addresses were presented by Dr. W. B. Baker, Director, Centre for Community Studies, University of Saskatchewan; Mr. J. O. Wright, Country Organization Department, Saskatchewan Wheat Pool, and Dr. E. A. Corbett, former Director, Canadian Association for Adult Education.

The topics for the coming season were discussed. Previous to this meeting, Farm Forum groups from across Canada had requested topics at topic planning meetings. The most popular topics from these meetings were the ones most discussed at this conference. The final list of topics and dates of broadcasts was left in the hands of the staff at the National Office and the CBC.

In addition to planning topics, the meeting brought together a large number of rural agencies to ensure that the Farm Forum topics and discussions would be of broad interest. Such joint planning ensures that, in addition to the regular farm forums which will meet each week during the winter, a large number of special groups will meet for several occasions.

A major improvement in farm forum methods has been worked out in the past year. An initial broadcast is presented, and groups respond with further questions on the subject for which they require answers. A second broadcast, just one week after the first, is based on these questions.

CHEMICAL CONTROL

(continued)

were believed to have been acquired within the country. On a world basis some ten years ago over 250 million people suffered from malaria annually and some two and a half million died. Dr. W. A. W. Brown 2 of the University of Western Ontario stated last year that that year (1962) would see no need for further spraying for malaria control in Europe, Japan, Taiwan, Israel, Lebanon and much of Iraq, Iran and Turkey. Over 86 countries have been involved in a World Health Organization attempt to eliminate this disease, yet no deleterious effects on humans and virtually no accidents among 130 thousand spraymen have been reported. Dr. Brown concludes his report by saying, "For those in doubt as to the usefulness of insecticides for human health and welfare, a night on the earth of an unsprayed African hut is suggested if they can find one."

11. All the evidence points to the existence of at least some safe and beneficial control chemicals. Pyrethrins as a household insecticide have an unblemished record. Rotenone appears to present few hazards. Ten years of experience in Quebec orchards with the fungicide glyodin has convinced Dr. E. J. LeRoux of Macdonald College that it is an effective fungicide, and a mite suppressant without deleterious effects on any of several insects studied or on any ecological factors. Without some such fungicide Quebec grown apples are so scabby as to be almost unusable.

Blanket condemnation of chemicals has become popular. I want to make a plea here for the two R's . . . Reason and Research. The public is now so confused that some people suffer the inconvenience of flies in the house and the torture of mosquitoes out of doors rather than use proved and approved sprays and repellents. Scientific workers who foster this unreasonable fear are doing humanity a disservice. Miss Carson has written beautifully but if she is to stand as a scientist she must present the whole picture and establish her judgement as based on something other than emotion, sentimentality and nostalgia. So long as we continue to increase both the human population and the desire for higher living standards we must seek means of increasing food production by increasing both the intensiveness and extensiveness of crop cultivation and by protecting both the crops and the harvest. Chemical methods have proved effective and safe when intelligently used. It is not intelligent to become emotionally opposed

to their use because errors in a few instances have lead to hazards belatedly recognized.

Intelligent use of chemicals must recognize possible dangers from widespread contamination of air, water and food and especially the danger of contamination exerting an influence at great distances as that occurring at the source of a stream and presenting problems in a lake many hundreds of miles away. It is this danger and that of cumulative hazards resulting from chemical use by a number of unco-ordinated agencies that has been recognized by the Science Advisory Committee to President Kennedy and has led to the now well publicized report of that Committee which demands: a comprehensive study of contamination; a review of present residue tolerances; a review of co-ordination of control programs operated by different agencies; a study of the practicability of zero tolerances (zero or total absence of residue is often impossible to establish), and a study of the hazards of insecticides used in products other than foods; e.g. Clothing. The report requires more emphasis also on research aimed at specific controls on non-persistant chemicals involved on man and animal life. Finally the report asks for the government presentation to the public of a clear picture of both the hazards and the values of pesticide use. The report recognizes the values and necessity of the use of chemicals where hazards can be minimized. With all these suggestions we cannot but agree.

1. from "New Worlds of Modern Science" Leonard Engle, editor, N.Y. Dell Publishing House, 1956 as cited by F. V. Stare, Nutrition Reviews Jan. 1963.
2. W. A. W. Brown (1962) Insecticides and human health. World Review of Pest Control I (3): 6-17

ABERDEEN ANGUS FIELD DAY
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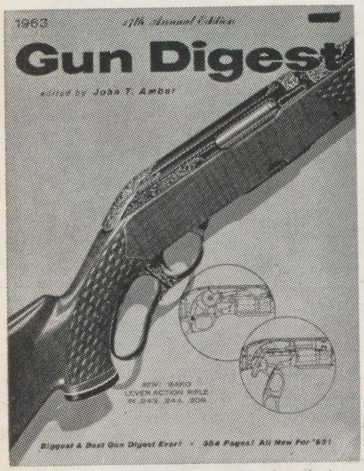

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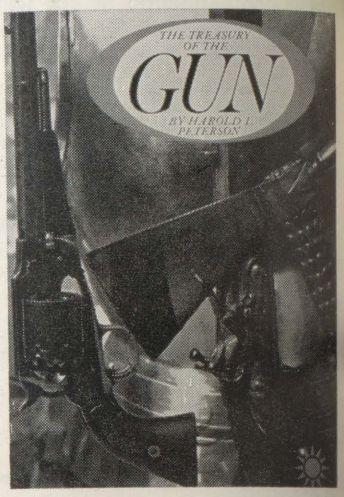

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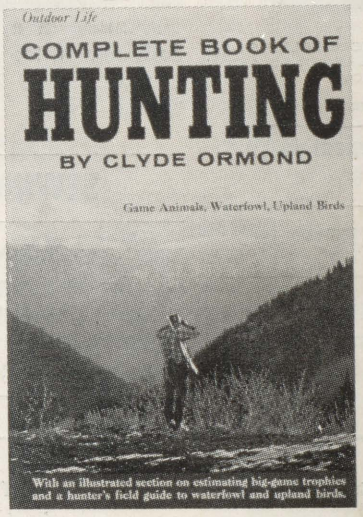

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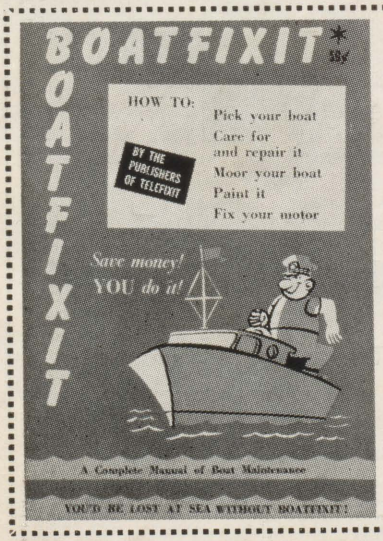

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